BEFORE THE
FEDERAL COMMUNICATIONS COMMISSION
WASHINGTON, D.C. 20554

In the Matter of: Advanced Methods to Target and Eliminate Unlawful Robocalls	CG Docket No. 17-59

COMMENTS OF TELCORDIA TECHNOLOGIES, INC. D/B/A ICONECTIV

Telcordia Technologies, Inc.,[1] doing business as iconectiv ("Telcordia" or "iconectiv"), is pleased to submit these comments responding to the Federal Communications Commission's ("FCC" or "Commission") questions raised in its Notice of Inquiry (NOI) on the mechanisms by which reassigned number information can be collected, aggregated, and distributed, so as to reduce the volume of unwanted robocalls and increase TCPA compliance.[2] iconectiv appreciates the opportunity to comment. We fully support the stated goal of eliminating unwanted robocalls while allowing legitimate wanted ones.

iconectiv has been an authoritative partner of the communications industry for more than thirty years. A U.S. based company, iconectiv has been a major architect of the United States' telecommunications system since it was formed at the divestiture of AT&T. We have first-hand

[1] Since February 14, 2013, Telcordia has been doing business as iconectiv.
[2] *In the Matter of Advanced Methods to Target and Eliminate Unlawful Robocalls,* Second Notice of Inquiry, FCC No. 17-90, CG Docket No. 17-59, rel. July 13, 2017 (2nd NOI).

knowledge of the intricacies and complexities of creating, operating and securely evolving the country's telecommunications infrastructure and services, including the dynamic nature of telephone numbers and how they are used by the varied stakeholders in the industry. Our core critical infrastructure competencies include highly scalable industry database management, numbering services, third-party authentication, and network fraud prevention for the telecommunications industry. We understand the technical and operational requirements as well as dependencies of a centralized reassigned number database, and provide these comments with that perspective.

DISCUSSION

iconectiv has been a longstanding and active participant in the subject matter of this proceeding. On July 3, 2017, we submitted Comments on this proceeding's original Notice of Proposed Rule Making / Notice of Inquiry focusing on blocking illegal robocalls. In addition, iconectiv filed comments in the recent Notice of Inquiry referred to as the Call Authentication Trust Anchor. In this latest NOI, the focus is shifted toward assisting legal robocallers[3] in reaching customers from whom they have already obtained consent, while preventing customers with reassigned numbers from receiving unwanted calls. As a leading provider of telecommunications technology services and an active contributor to the joint ATIS/SIP Forum emerging call authentication standards, iconectiv is well-positioned to offer responses to the issues highlighted in this 2nd NOI.

[3] Because "robocalling" has taken on a pejorative connotation due chiefly to the actions of entities using illegal spoofing to make unwanted and/or fraudulent calls, iconectiv will hereinafter use the term "commercial callers" to identify the many bona-fide enterprises and organizations that use automated dialing techniques to provide information and services to their customers.

iconectiv notes that the 2nd NOI emphasizes that the Commission does not seek comment regarding the TCPA, its implementing rules, or enforcement precedents. iconectiv respects the Commission's wishes and will offer responses directed to the question providing data on reassigned numbers to commercial callers in the most effective way. Nonetheless, iconectiv believes it is important for the Commission to recognize and distinguish those entities inadvertently violating the TCPA from those intentionally doing so, regardless of the existence of a central reassigned number system.

Reporting Number Reassignments (¶ 10-14). The 2nd NOI presumes that voice providers track disconnected and reassigned number information and that it is only then a question of creating a centralized database of reassigned numbers. First, there is a significant difference for voice providers, from a technical and operations perspective, between simply aging a disconnected number before returning it to their available pool, and managing reassigned numbers in a database solution and synchronizing with a central system. Complexities exist where a subscriber number may be suspended due to non-payment and then later reactivated with payment, as the process involves an aging schedule.[4] When aging is completed, the telephone number moves either to "available" status, or may "snap back" to the original service provider if it was ported. Some voice providers snap back promptly after disconnect while others may age their numbers beforehand. Consideration should also be given to numbers that subscribers have swapped for new numbers, being as the original number is effectively disconnected. Further, there is no common practice across carriers that resell numbers. Some resellers may require their retail voice providers to return disconnected numbers to them and some resellers may allow

[4] With a 90-day maximum for residential numbers (wireless and wireline). "Numbers previously assigned to residential customers may be aged for no more than 90 days." *See* Rule 52.15(f)(1)(ii).

those providers to retain the numbers and reassign them after aging, essentially having no visibility once the number is 'delegated' to the retail voice provider.

The Commission asks how voice providers could report information about the reassignment of NANP numbers they have been allocated. As there are no real-time reassigned number databases to integrate with a central database, voice providers would be required to first devise their own systems and structures. Those costs and burdens would be in addition to what also would be required for the creation of operational, technical, and financial systems to implement and maintain the sort of centralized real-time number database the FCC seeks to make available to commercial callers.

The Commission further asks what information should voice providers report – disconnected, newly available or reassigned numbers. TCPA violations occur only when an active number receives a call or text that was unwanted, and further that commercial callers must typically cover the expense of all outbound calls and texts, not only the answered ones. Thus, the vast majority of commercial callers have an interest in knowing when the number disconnects. This is especially true of calls initiated manually given the expense of the person undertaking that effort. While not a robocall per se, many companies making robocalls also have such call types so that often sways the requirement towards disconnected numbers. In any case, there are still a good proportion of commercial callers who only care to know the number is now reassigned to a different party, presumably to optimize their cost for such a reporting service itself as opposed to their costs for initiating calls and texts. So there is no simple answer regarding what commercial callers would want reported.

The Commission seeks comment on what other information should be reported, such as when a number was disconnected or reassigned. Commercial callers need to know the telephone number and the date/time it was disconnected (or reassigned). These entities have customer records that can be several years old and the same number can be recycled more than once over a period of time. Disconnect/reassigned number information is not useful unless the commercial caller can compare the effective date with their own information regarding their last known contact with the correct party. This is known as the right party contact date (RPCD) and it will obviously vary for the same customer telephone number from one commercial caller to another. In addition, the Commission asks if the type of number (VoIP, wireless or landline) is relevant. Indeed, the majority of commercial callers are interested in this information.

Reporting Disconnected Numbers (¶ 11, 24). The Commission also asks if reporting disconnected numbers could be a tool for unscrupulous Robocallers looking to leverage these as the Caller ID in their illegal calls. The FTC recently increased the amount and frequency of data it is releasing from customers' unwanted call complaints to help support call blocking efforts.[5] iconectiv conducted an analysis on a sample of this complaint data supplemented by iconectiv employee experiences with unwanted calls. Initial observations indicate that robocallers and spoofers use, primarily, assigned telephone numbers (TNs) of all types and locations. This suggests that TN properties and status in isolation are not in themselves a meaningful factor in what numbers Robocallers choose to originate from, whether spoofed or not. Moreover, we also observed that:

[5] https://www.ftc.gov/news-events/press-releases/2017/08/ftc-escalates-fight-against-illegal-robocalls-using-consumer?utm_source=slider

- Duplicates are frequently reported by consumers, indicating that adversaries are not strictly rotating thru different numbers to avoid detection.

- There is no indication that the numbers spoofed were reassigned nor pending reassignment, and only on rare occasion was the number not assigned to a carrier at all, suggesting that assignment status, even if available, would not be of significant interest to parties making illegal spoofed calls.

- Distinct TNs were ported roughly 20% of the time, but for the most part, those ports were several years old, suggesting that ported numbers are not especially targeted for use in spoofed calls.

- Robocallers use both standard and toll-free telephone numbers for the same campaigns. In the case of toll-free numbers, they were generally assigned several years ago with the exception of numbers used in the IRS scam. In those cases, the toll-free numbers were assigned within the past year.

- TNs are spread across a variety of carrier owners and LATAs, showing no appreciable pattern. Furthermore, TNs covered all of the line types: fixed, VoIP, and mobile.

No material pattern was discerned in the Caller ID of robocalls, spoofed or otherwise, other than VoIP numbers accounting for nearly half of our sample and, if spoofed, Caller ID was often, but not always, spoofed to appear to be 'local' from the called party's NPA-NXX depending on the nature of the call. We encourage further study on a statistically larger sample size to arrive at a data-driven, fact-based formulation of the true contribution of number reassignments and other number properties to the Caller ID used in unwanted robocalls.

Reporting Alternatives (**¶ 15-19**). The Commission asks for comment on the various reporting frameworks that could provide commercial callers with reassigned number information. As an information aggregator to the telecommunications industry, iconectiv has

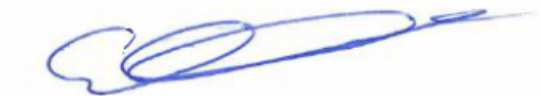
firsthand insight that companies do not have the technology, operational scale, or expertise to interface to all carriers' queriable databases individually (should they even exist) in order to aggregate this data themselves. There are thousands of voice providers, and commercial callers engage with customers spread across a great many of them. To be selective implies that the commercial caller knows which voice provider serves the telephone numbers on file for all of their customers. As stated earlier, this association is not static and would be challenging to maintain.

FCC-Established Database (¶ 30). The FCC asks if it would it be necessary to create an entirely new database or if it would be possible to expand or modify an existing database, such as the NPAC database, to accommodate reassigned number information. The NPAC is the most technically and operationally scalable of all FCC numbering databases given it collects changes in telephone number state from every provider and broadcasts the changes to the entire industry, including commercial callers, on a continuous basis. There are certainly parallels with a reassigned number framework. However, as noted in our submission on the original NPRM/NOI, the NPAC is an exception database that has phone numbers that have been ported or pooled, and are presentably routable by Location Routing Number (LRN), although not necessarily assigned in every case. Further, while all pooled numbers are in the NPAC, it is not known which among them are assigned unless they are also ported. Even then, they may be already disconnected and pending a snap back to the original provider after which they effectively disappear from the NPAC. Thus the suitability of extending the NPAC to serve as a reassigned number database warrants a great deal more consideration prior to making such a decision.

CONCLUSION

Should the FCC proceed to establish a reassigned number database, iconectiv recommends that it be referred to the NANC. The NANC is a longstanding well-respected advisory committee comprised of the broad spectrum of stakeholders – wireline, wireless, VoIP, interexchange, state public utility commission, state consumer protection, cable telephony and trade associations – that are well positioned to evaluate the technical, operational, and financial considerations necessary for a reassigned number database.

Respectfully submitted,



Chris Drake
CTO of Telcordia Technologies, Inc. d/b/a iconectiv

Dated: August 28, 2017